

Single Ultra Low VF Schottky Rectifier

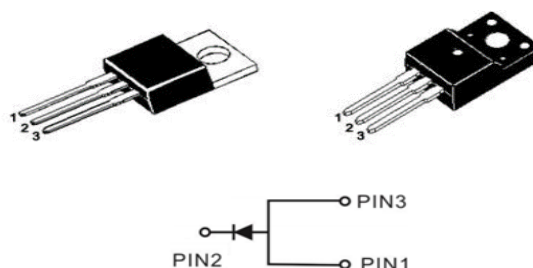
FEATURES AND BENEFITS

- Low power loss, high efficiency operation
- Low forward voltage drop
- Fast switching capability
- High forward surge capability
- Excellent High Temperature Stability

MECHANICAL DATA

- Epoxy : UL94 V-0 rated flame retardant
- Case: TO-220AB / ITO-220AB Package
- Terminals: Matte Tin annealed over copper
- Weight: Approximated 2.03 grams

Primary Characteristic	
I_O	20A
V_{RRM}	100V
I_{FSM}	170A
V_F Typical=2A , $T_J=125^\circ\text{C}$	0.36V
T_{Jmax}	175°C



Maximum Ratings (Ta=25°C unless otherwise specified)						
Characteristics			Symbol	Value		Unit
Peak Repetitive Reverse Voltage			V _{RRM}	100		V
Working Peak Reverse Voltage			V _{RWM}	100		V
DC Blocking Voltage			V _{DC}	100		V
RMS Reverse Voltage			V _{RMS}	70		V
Average Forward Rectified Current (per diode)			I _O	20		Amps
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)			I _{FSM}	170		Amps
Electrical Characteristics (Ta=25°C unless otherwise specified)						
Characteristics			Symbol	Typ.	Max.	Unit
Forward Voltage Drop ¹⁾	IF=2A	Ta=25°C	V _F	0.44	0.48	V
	IF=20A	Ta=25°C	V _F	0.96	1.00	V
	IF=2A	Ta=125°C	V _F	0.36	0.40	V
	IF=20A	Ta=125°C	V _F	0.70	0.74	V
Reverse Current ²⁾	VR=100V	Ta=25°C	I _R	30	90	μA
	VR=100V	Ta=125°C	I _R	5	15	mA

THERMAL CHARACTERISTICS ($T_A = 25^\circ\text{C}$ unless otherwise noted)				
Characteristics		Symbol	Value	Unit
Typical Thermal Resistance, junction to case	TO-220AB	$R_{\theta JC}$	2.8	$^\circ\text{C/W}$
Typical Thermal Resistance, junction to case	ITO-220AB	$R_{\theta JC}$	4.0	$^\circ\text{C/W}$
Operating Temperature Range (in DC Mode)		T_J	-65 to +175	$^\circ\text{C}$
Storage Temperature Range		T_{STG}	-65 to +150	$^\circ\text{C}$

Notes (1): Pulse test: 300 μs pulse width, 1% duty cycle.

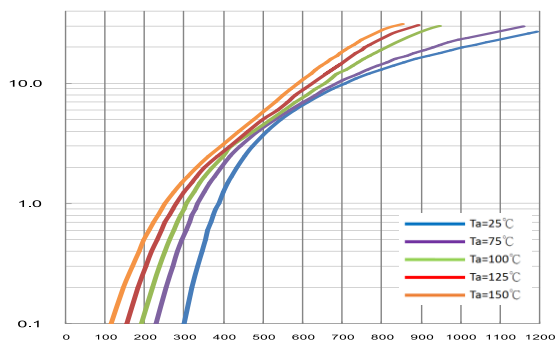
Notes (2): Pulse width $\leq 40\text{ms}$

Notes (3): FR-4 PCB, 2oz copper. Minimum recommended pad layout

RATINGS AND CHARACTERISTICS CURVES

Instantaneous Forward Current (A)

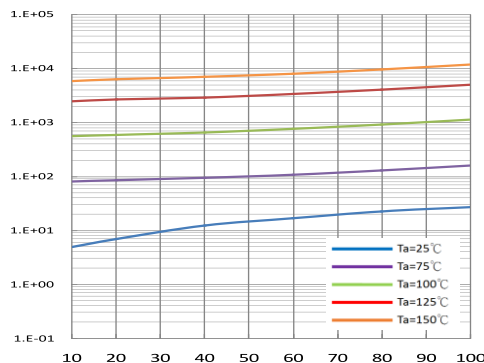
Fig 1. Typical Forward Characteristics



Instantaneous Forward Voltage (mV)

Instantaneous Reverse Current (μ A)

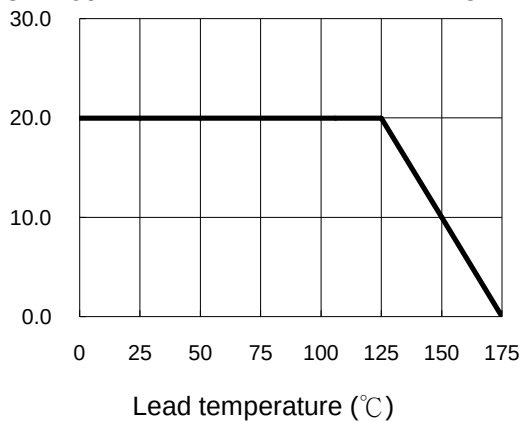
Fig 2. Typical Reverse Characteristics



Percent of Rated Peak Reverse Voltage (%)

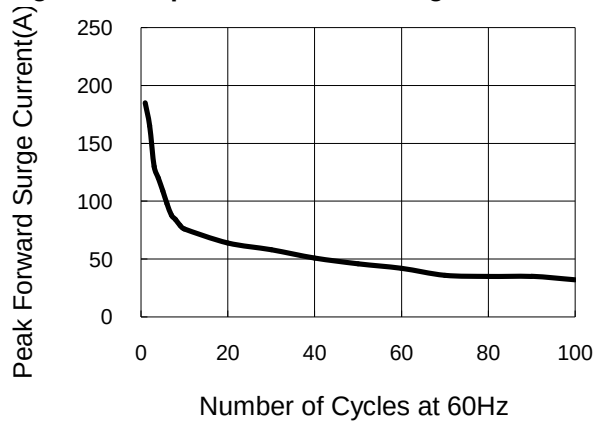
Average Forward Current (A)

Fig 3. Typical Forward Current Derating Curve



Lead temperature (°C)

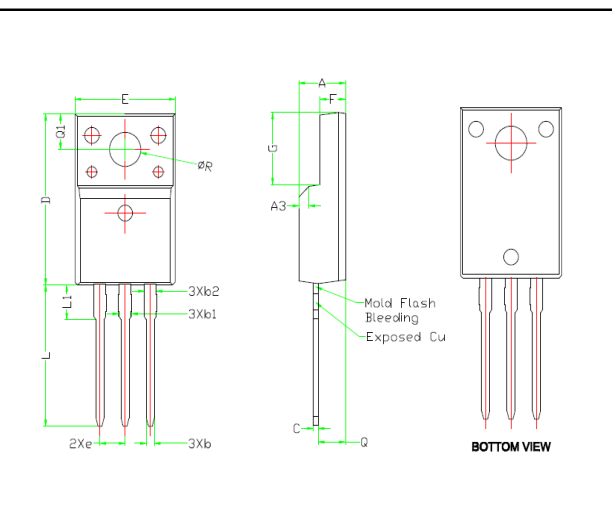
Fig 4. Non-repetitive Forward Surge Current



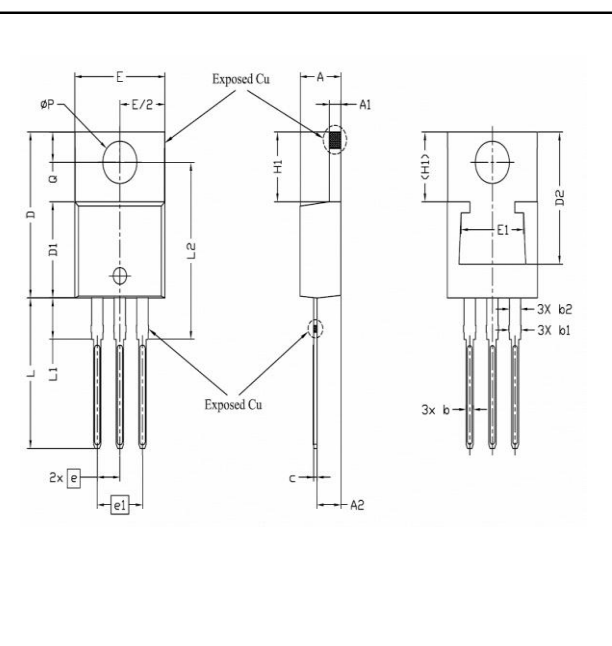
Number of Cycles at 60Hz

Package Outline Dimensions (in millimeters)

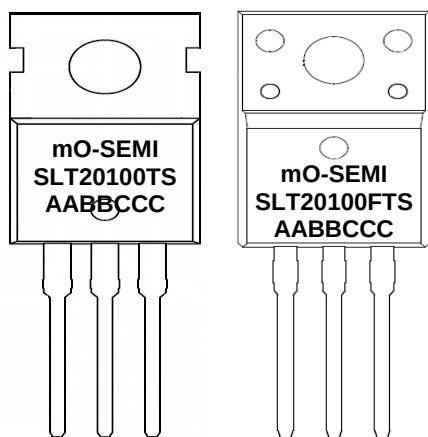
ITO-220				
SYMBOL	Dimensions			
	Millimeters		Inches	
	Min	Max	Min	Max
A	4.60	4.80	0.18	0.19
b	0.70	0.91	0.03	0.04
b1	1.20	1.47	0.05	0.06
b2	1.10	1.30	0.04	0.05
C	0.45	0.63	0.02	0.02
D	15.80	15.97	0.62	0.63
e	2.54			
E	10.00	10.10	0.39	0.40
F	2.44	2.54	0.10	0.10
G	6.50	6.70	0.26	0.26
L	12.90	13.10	0.51	0.52
L1	3.13	3.23	0.12	0.13
Q	2.65	2.75	0.10	0.11
Q1	3.20	3.30	0.13	0.13
Ψr	3.08	3.18	0.12	0.13



TO-220				
SYMBOL	Dimensions			
	Millimeters		Inches	
	Min	Max	Min	Max
A	3.56	4.82	0.14	0.19
A1	0.51	1.39	0.02	0.05
A2	2.04	2.92	0.08	0.11
b	0.39	1.01	0.02	0.04
b1	1.15	1.82	0.05	0.07
b2	1.15	1.77	0.05	0.07
c	0.04	0.50	0.00	0.02
D	14.22	16.51	0.56	0.65
D1	8.39	9.01	0.33	0.35
D2	11.45	12.87	0.45	0.51
E	9.66	10.66	0.38	0.42
E1	6.86	8.89	0.27	0.35
e	2.54BSC		2.54BSC	
e1	5.08BSC		5.08BSC	
H1	5.85	6.85	0.23	0.27
L	12.70	14.73	0.50	0.58
L1	-	6.35	-	0.25
L2	15.80	16.20	0.62	0.64
ψP	3.54	4.08	0.14	0.16
Q	2.54	3.42	0.10	0.13



Marking Information



mO-SEMI
SLT20100
AABBBCCC
*FTS=ITO-220
*TS=TO-220

=Series Name
=Part Number Marking Code
=Product Tracking Code
=Single ITO-220
=Single TO-220